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PATENT
Docket No. SJO920030067US1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant:	Joseph J. Fatula, Jr.	
Serial No.:	10/735,938	
Filed:	December 15, 2003	
For:	**APPARATUS, SYSTEM, AND METHOD FOR AUTONOMIC CONTROL OF GRID SYSTEM RESOURCES**	Group Art Unit: 2141
Examiner:	Nicholas R. Taylor	

APPEAL BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Examiner:

The USPTO received Appellant's timely Notice of Appeal on June 5, 2008, which was filed in response to the Final Office Action mailed February 5, 2008 (hereinafter OA080205) and the Advisory Action filed May 19, 2008 (hereinafter AA080519). Appellant appeals the rejection of pending claims 1-9 and 2--35.

This Brief is being filed under the provisions of 37 C.F.R. § 41.37. The filing fee set forth in 37 C.F.R. § 41.20(b)(2) of $510.00 is submitted herewith. The Commissioner is hereby authorized to charge payment of any additional fees associated with this communication, or to credit any overpayment, to Deposit Account No. 09-0466.

1. REAL PARTY IN INTEREST

The real party in interest is the assignee, International Business Machines Corporation.

2. RELATED APPEALS AND INTERFERENCES

There are no related appeals, interferences, or judicial proceedings.

3. STATUS OF CLAIMS

The Office Action cites the following art: "Dynamic virtual clusters in a grid site manager" by Chase et al. (hereinafter Chase); "SHARP: An Architecture for Secure Resource Peering" by Fu et al. (hereinafter Fu).

Claims 1-9 and 20-35 are pending in the case. Claims 10-19 are canceled. Claims 1, 20, 23, 24, and 30 are independent claims. Claims 1-9 and 20-35 are rejected under 35 USC § 103(a) as unpatentable over the combination of Chase and Fu.

The claims remain rejected as set forth in the final rejection as noted in the Advisory Action of May 19, 2008. Appellant appeals the rejection of claims 1-9 and 20-35.

4. STATUS OF AMENDMENTS

No proposed amendments are pending.

5. SUMMARY OF CLAIMED SUBJECT MATTER

The claimed subject matter deals with autonomic management of grid computing system resources. See published version of the application US Patent Publication No. 2005/0131993 (hereinafter '993) page 1, ¶ 9.

The problem addressed is the stimulus/response granting of grid resources does not account for the dynamic allocation of the resources within the grid computing system. See '993, page 1, ¶ 7. The present invention provides for autonomic management of grid computing system resources. See '993, page 1, ¶ 9. Specifically, the claimed invention regulates resources in response to a recognized trigger event according to one of a plurality of system policies,

wherein the plurality of system policies comprises a system prediction policy. See '993, page 4, ¶ 42; page 6, ¶ 71.

1. Embodiments of the present invention include one or more apparatus, one or more methods, and a computer readable storage medium. [1] See e.g. claims 1, 20, 23, 24, and 30. Claim 1 presents an autonomic management apparatus for autonomic management of system resources on a grid computing system. The system includes a monitor module ('993, fig. 3, ref. 322; fig. 4, ref. 424) that monitors the grid computing system for a trigger event ('993, page 4, ¶ 46; page 5, ¶ 57; pages 5-6, ¶ 63; fig. 5, ref. 504; fig. 6, ref. 604) .

The apparatus also includes a policy module ('993, fig. 3, ref. 324; fig. 4, ref. 426). The policy module accesses one of a plurality of system policies ('993, page 4, ¶ 46; page 5, ¶ 57). Each of the plurality of system policies corresponds to an operational control parameter of a system resource of the grid computing system ('993, page 1, ¶ 13; fig. 1, ref. 100). The plurality of system policies comprises a system prediction policy ('993, page 4, ref. 42, fig. 3, ref. 316). A regulation module ('993, fig. 3, ref. 326; fig. 4, ref. 430) autonomically regulates the system resource in response to a recognized trigger event according to one of the plurality of system policies ('993, page 4, ¶ 47).

The following quotation of claim 1 includes reference numerals and parenthetical references to representative examples of the elements and components recited in claim 1 in compliance with 37 CFR 41.37(c)(1)(v).

1. An autonomic management apparatus for autonomic management of system resources on a grid computing system, the apparatus comprising:

a monitor module ('993, fig. 3, ref. 322; fig. 4, ref. 424) configured to monitor the grid computing system for a trigger event ('993, page 4, ¶ 46; page 5, ¶ 57; pages 5-6, ¶ 63; fig. 5, ref. 504; fig. 6, ref. 604);

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[1] Although Appellant has summarized embodiments of the present invention, the present invention is defined by the claims themselves. Appellant's summary is not intended to limit the scope of the claims or individual claim elements in complying with the appeal brief requirements under 37 C.F.R. § 41.37(c)(v).

a policy module ('993, fig. 3, ref. 324; fig. 4, ref. 426) configured to access one of a plurality of system policies ('993, page 4, ¶ 46; page 5, ¶ 57), each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system ('993, page 1, ¶ 13; fig. 1, ref. 100), wherein the plurality of system policies comprises a system prediction policy ('993, page 4, ref. 42, fig. 3, ref. 316); and

a regulation module ('993, fig. 3, ref. 326; fig. 4, ref. 430) configured to autonomically regulate the system resource in response to a recognized trigger event according to one of the plurality of system policies ('993, page 4, ¶ 47).

Claim 20 presents a method for autonomic management of system resources on a grid computing system. The method includes monitoring the grid computing system for a trigger event ('993, page 4, ¶ 46; page 5, ¶ 57; pages 5-6, ¶ 63; fig. 5, ref. 504; fig. 6, ref. 604).

In addition, the method includes accessing one of a plurality of system policies ('993, page 4, ¶ 46; page 5, ¶ 57). Each of the plurality of system policies corresponds to an operational control parameter of a system resource of the grid computing system ('993, page 1, ¶ 13; fig. 1, ref. 100). The plurality of system policies comprise a system prediction policy ('993, page 4, ref. 42, fig. 3, ref. 316). The method also includes regulating the system resource in response to a recognized trigger event according to one of the plurality of system policies ('993, page 4, ¶ 47).

The following quotation of claim 20 includes reference numerals and parenthetical references to representative examples of the elements and components recited in claim 20 in compliance with 37 CFR 41.37(c)(1)(v).

20. A method for autonomic management of system resources on a grid computing system, the method comprising:

monitoring the grid computing system for a trigger event ('993, page 4, ¶ 46; page 5, ¶ 57; pages 5-6, ¶ 63; fig. 5, ref. 504; fig. 6, ref. 604);

accessing one of a plurality of system policies ('993, page 4, ¶ 46; page 5, ¶ 57), each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system ('993, page 1, ¶ 13; fig. 1, ref. 100), wherein the plurality

of system policies comprises a system prediction policy ('993, page 4, ref. 42, fig. 3, ref. 316); and

regulating the system resource in response to a recognized trigger event according to one of the plurality of system policies ('993, page 4, ¶ 47).

Claim 23 presents a method for autonomic management of grid system resources on a grid computing system. The method includes monitoring the grid computing system for a trigger event ('993, page 4, ¶ 46; page 5, ¶ 57; pages 5-6, ¶ 63; fig. 5, ref. 504; fig. 6, ref. 604). The trigger event comprises one of an initiation trigger event, a regulation trigger event, and a prediction trigger event ('993, page 1, ¶ 13).

The method also includes accessing one of a plurality of system policies ('993, page 4, ¶ 46; page 5, ¶ 57). The plurality of system policies comprises a system prediction policy ('993, page 4, ref. 42, fig. 3, ref. 316). Each of the plurality of system policies correspond to an operational control parameter of a system resource of the grid computing system ('993, page 1, ¶ 13; fig. 1, ref. 100). The operational control parameter comprises a command to regulate the system resource ('993, page 4, ¶ 47).

In addition, the command includes regulating the system resource in response to a recognized trigger event according to one of the plurality of system policies ('993, page 4, ¶ 47). The system resource comprises one of a client processor capacity, a client storage capacity, and a client memory capacity allocated to the grid computing system ('993, page 3, ¶ 35). The method further includes storing a system resource profile, the system resource profile identifying a system resource of a client, the system resource allocated by the client to the grid computing system ('993, page 4, ¶ 42).

The following quotation of claim 23 includes reference numerals and parenthetical references to representative examples of the elements and components recited in claim 23 in compliance with 37 CFR 41.37(c)(1)(v).

23. A method for autonomic management of grid system resources on a grid computing system, the method comprising:

monitoring the grid computing system for a trigger event ('993, page 4, ¶ 46; page 5, ¶ 57; pages 5-6, ¶ 63; fig. 5, ref. 504; fig. 6, ref. 604), the trigger event comprising one of an initiation trigger event, a regulation trigger event, and a prediction trigger event ('993, page 1, ¶ 13);

accessing one of a plurality of system policies ('993, page 4, ¶ 46; page 5, ¶ 57), wherein the plurality of system policies comprises a system prediction policy ('993, page 4, ref. 42, fig. 3, ref. 316), each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system ('993, page 1, ¶ 13; fig. 1, ref. 100), the operational control parameter comprising a command to regulate the system resource ('993, page 4, ¶ 47);

regulating the system resource in response to a recognized trigger event according to one of the plurality of system policies ('993, page 4, ¶ 47) and, the system resource comprising one of a client processor capacity, a client storage capacity, and a client memory capacity allocated to the grid computing system ('993, page 3, ¶ 35);

storing a system resource profile, the system resource profile identifying a system resource of a client, the system resource allocated by the client to the grid computing system ('993, page 4, ¶ 42).

Claim 24 presents a computer readable storage medium comprising computer readable code configured to carry out a method for autonomic management of system resources on a grid computing system. The method includes monitoring the grid computing system for a trigger event ('993, page 4, ¶ 46; page 5, ¶ 57; pages 5-6, ¶ 63; fig. 5, ref. 504; fig. 6, ref. 604).

The method further includes accessing one of a plurality of system policies ('993, page 4, ¶ 46; page 5, ¶ 57). Each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system ('993, page 1, ¶ 13; fig. 1, ref. 100). The plurality of system policies comprises a system prediction policy ('993, page 4, ref. 42, fig. 3, ref. 316). The method also includes regulating the system resource in response to a recognized trigger event according to one of the plurality of system policies ('993, page 4, ¶ 47).

The following quotation of claim 24 includes reference numerals and parenthetical references to representative examples of the elements and components recited in claim 24 in compliance with 37 CFR 41.37(c)(1)(v).

24. A computer readable storage medium comprising computer readable code configured to carry out a method for autonomic management of system resources on a grid computing system, the method comprising:

monitoring the grid computing system for a trigger event ('993, page 4, ¶ 46; page 5, ¶ 57; pages 5-6, ¶ 63; fig. 5, ref. 504; fig. 6, ref. 604);

accessing one of a plurality of system policies ('993, page 4, ¶ 46; page 5, ¶ 57), each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system ('993, page 1, ¶ 13; fig. 1, ref. 100), wherein the plurality of system policies comprises a system prediction policy ('993, page 4, ref. 42, fig. 3, ref. 316); and

regulating the system resource in response to a recognized trigger event according to one of the plurality of system policies ('993, page 4, ¶ 47).

Claim 30 presents an apparatus for autonomic management of grid system resources on a grid computing system. The apparatus includes means ('993, fig. 3, ref. 322; fig. 4, ref. 424) for monitoring the grid computing system for a trigger event ('993, page 4, ¶ 46; page 5, ¶ 57; pages 5-6, ¶ 63; fig. 5, ref. 504; fig. 6, ref. 604).

The apparatus further includes means ('993, fig. 3, ref. 324; fig. 4, ref. 426) for accessing one of a plurality of system policies ('993, page 4, ¶ 46; page 5, ¶ 57). Each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system ('993, page 1, ¶ 13; fig. 1, ref. 100). The plurality of system policies comprises a system prediction policy ('993, page 4, ref. 42, fig. 3, ref. 316). In addition, the apparatus includes means ('993, fig. 3, ref. 326; fig. 4, ref. 430) for regulating the system resource in response to a recognized trigger event according to one of the plurality of system policies ('993, page 4, ¶ 47).

The following quotation of claim 30 includes reference numerals and parenthetical references to representative examples of the elements and components recited in claim 30 in compliance with 37 CFR 41.37(c)(1)(v).

30. An apparatus for autonomic management of grid system resources on a grid computing system, the apparatus comprising:

means ('993, fig. 3, ref. 322; fig. 4, ref. 424) for monitoring the grid computing system for a trigger event ('993, page 4, ¶ 46; page 5, ¶ 57; pages 5-6, ¶ 63; fig. 5, ref. 504; fig. 6, ref. 604);

means ('993, fig. 3, ref. 324; fig. 4, ref. 426) for accessing one of a plurality of system policies ('993, page 4, ¶ 46; page 5, ¶ 57), each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system ('993, page 1, ¶ 13; fig. 1, ref. 100), wherein the plurality of system policies comprises a system prediction policy ('993, page 4, ref. 42, fig. 3, ref. 316); and

means ('993, fig. 3, ref. 326; fig. 4, ref. 430) for regulating the system resource in response to a recognized trigger event according to one of the plurality of system policies ('993, page 4, ¶ 47).

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

I. Whether the Examiner properly rejected claims 1-9 and 20-35 under 35 U.S.C. §103(a) as obvious in view of Chase and Fu?

7. ARGUMENT

I. The rejection of claims 1-9 and 20-35 under 35 U.S.C. §103(a) as obvious in view of Chase and Fu is improper because Chase and Fu fail to teach each element of claims 1-9 and 20-35.

Summary of the Examiner arguments

[001] The Examiner rejects claims 1-9 and 20-35 under 35 U.S.C. § 103(a) as being unpatentable over Chase in view of Fu. In particular, the Examiner relies on Fu for disclosing a system prediction policy. In OA080205 and AA080519, the Examiner indicates that the Appellant's arguments are unpersuasive.

Response

[002] Appellant respectfully reaffirms the arguments raised against the rejection of claims 1-9 and 20-35 under 35 USC §103(a) set forth in the response mailed April 7, 2008.

The legal requirements

It is well settled that the PTO has the burden to establish a *prima facie* case of obviousness. *In re Glaug*, 2002 U.S. App. Lexis 4246, *4 (Fed. Cir. March 15, 2002); MPEP §2142. "To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." MPEP §2143.03.

The four factual inquires for determining obviousness are as follows:
(A) Determining the scope and contents of the prior art;
(B) Ascertaining the differences between the prior art and the claims in issue;
(C) Resolving the level of ordinary skill in the pertinent art; and
(D) Evaluating evidence of secondary considerations. MPEP § 2141 I.

Claim 1

[003] Claim 1 recites:

1. An autonomic management apparatus for autonomic management of system resources on a grid computing system, the apparatus comprising:

a monitor module configured to monitor the grid computing system for a trigger event;

a policy module configured to access one of a plurality of system policies, each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system, wherein **the plurality of system policies comprises a system prediction policy**; and

a regulation module configured to autonomically regulate the system resource in response to a recognized trigger event according to one of the plurality of system policies.

[004] Appellant maintains the position that Chase and Fu do not teach or disclose each element of claim 1. Claim 1 is representative of the other rejected independent claims 20, 23, 24, and 30.

[005] Claim 1 includes the limitation "...the plurality of system policies comprises **a system prediction policy**..." The Examiner acknowledges that Chase does not disclose a system prediction policy. However, the Examiner argues that Fu discloses a system prediction policy by teaching reserving resources across a system for predictable behavior and probabilistic oversubscribed tickets. AA080519, page 2, lines 14-17, citing Fu, p. 134, ¶ 2; page 136, 2.2. Appellant respectfully disagrees.

[006] Fu is directed toward a framework, referred to as Secure Highly Available Resource Peering (SHARP), for distributed resource management, resource control, and resource sharing across sites in an Internet-scale computing infrastructure. Fu, page 133, Abstract; page 134, Introduction, ¶ 6. More specifically, SHARP uses a system of claims, separated into tickets and leases, which allow coordinated resource management within the distributed computing infrastructure. Fu, page 133, Abstract.

[007] In Fu, the stated need for predictable behavior within the distributed computing infrastructure does not teach an actual system prediction policy, as recited in claim 1 of the present application. In particular, the general references to predictability (Fu, page 133, Introduction, ¶ 2), predictable performance (Fu, page 137, section 2.3, ¶ 8; page 141, section 4, ¶ 1), and predictable behavior (Fu, page 134, Introduction, ¶ 4), as set forth in Fu, do not provide a sufficient basis to support the Examiner's assertion of a teaching of a system prediction policy because these general references are not specifically directed to any type of policy which might regulate a system resource in response to a trigger. Similarly, the explanation that users have

little basis to predict the available resources (Fu, page 134, Introduction, ¶ 1) merely describes a problem identified with conventional distributed computing infrastructures, but does not describe any type of system prediction policy for use with the described SHARP implementation.

[008] Moreover, while Fu describes a process for oversubscription of resources, the described oversubscription process also fails to teach a system prediction policy. Oversubscribed tickets are probabilistic. Fu, page 136, section 2.2, ¶ 2. In general, Fu explains that a SHARP agent may oversubscribe its resources by issuing more tickets than it can support from the resource claims that at holds. Fu, Section 2.2, paragraph 1.

[009] However, this oversubscription process merely refers to the relationship of how many tickets are issued by a SHARP agent relative to the available resources of the SHARP agent. Fu does not teach a prediction policy because there is no described predictability associated with the oversubscription process. Furthermore, none of these characteristics describe or implement an actual policy, of any kind, related to predictability of the distributed computing infrastructure. In fact, the process of allowing oversubscription of resources by issuing more tickets than a SHARP agent can support teaches away from a system prediction policy by introducing more unpredictability into the distributed computing infrastructure, making it unclear whether each oversubscribed claim might be granted or rejected.

[010] The Examiner further argues that Fu discloses predictive polices where resource use is anticipated. AA080519, page 2, line 16 – page 3, line 1, citing Fu, page 136, section 2.2. As explained above, Section 2.2 of Fu describes the oversubscription process, but there is no description of the oversubscription process facilitating anticipation of resource use. At best, the oversubscription process facilitates best-effort service to process oversubscribed tickets. Fu, Section 2.2, paragraph 4. However, the description of such best-effort service is insufficient to teach a system prediction policy, as recited in claim 1, because there is no predictability facilitated by the best-effort service to process oversubscribed tickets. Moreover, Fu does not explicitly describe any type of "anticipation" in relation to the SHARP framework.

[011] Finally, the Examiner argues that the Appellant is relying on a narrow reading of "prediction" in arguing that Fu does not disclose a system prediction policy. AA080519, page 3, lines 1-3. Appellant respectfully disagrees. Fu describes an oversubscription policy rather than a system prediction policy. While as described above Fu makes reference to prediction, Fu does

not teach a system prediction policy. Appellant therefore submits that Fu does not disclose the element of a system prediction policy of claim 1, and that claim 1 is therefore allowable.

[012] Claims 20, 23, 24, and 30 also include the limitation of a system prediction policy discussed above in relation to claim 1. Therefore, claims 20, 23, 24, and 30 are allowable for at least the same reasons as claim 1. Claims 2-9, 21, 22, 25-29 and 31-35 depend from claims 1, 20, 24, and 30 are allowable for at least the same reasons as the independent claims.

SUMMARY

In view of the foregoing, Appellant respectfully asserts that each of the claims on appeal has been improperly rejected because the rejection under 35 U.S.C. §103(a) is improper. Therefore, Appellant respectfully requests reversal of the Examiner's rejection under 35 U.S.C. §103(a), and urges that pending claims 1-9 and 20-35 are ready for prompt allowance. Appellant appeals to the Board's objective and reasoned decision on this matter.

Respectfully submitted,

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8. CLAIMS APPENDIX

The claims involved in the appeal, namely claims 1-9 and 20-35, are listed below.

1. An autonomic management apparatus for autonomic management of system resources on a grid computing system, the apparatus comprising:

a monitor module configured to monitor the grid computing system for a trigger event;

a policy module configured to access one of a plurality of system policies, each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system, wherein the plurality of system policies comprises a system prediction policy; and

a regulation module configured to autonomically regulate the system resource in response to a recognized trigger event according to one of the plurality of system policies.

2. The apparatus of claim 1, wherein the trigger event comprises one of an initiation trigger event, a regulation trigger event, and a prediction trigger event.

3. The apparatus of claim 1, wherein the operational control parameter comprises a command to regulate the system resource.

4. The apparatus of claim 1, wherein the system resource comprises one of a client processor capacity, a client storage capacity, and a client memory capacity allocated to the grid computing system.

5. The apparatus of claim 1, wherein the regulation module comprises a reservation module configured to reserve the system resource for a grid system operation.

6. The apparatus of claim 1, wherein the regulation module comprises a termination module configured to terminate a reservation of a system resource for a grid system operation.

7. The apparatus of claim 1, wherein the regulation module comprises an arbitration module configured to arbitrate conflicting grid system operations according to an arbitration policy.

8. The apparatus of claim 1, wherein the regulation module comprises a profile module configured to store a system resource profile, the system resource profile identifying a system resource of a client, the system resource allocated by the client to the grid computing system.

9. The apparatus of claim 1, wherein the plurality of system policies further comprises at least one of a system regulation policy and a system termination policy.

20. A method for autonomic management of system resources on a grid computing system, the method comprising:

monitoring the grid computing system for a trigger event;

accessing one of a plurality of system policies, each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system, wherein the plurality of system policies comprises a system prediction policy; and

regulating the system resource in response to a recognized trigger event according to one of the plurality of system policies.

21. The method of claim 20, further comprising reserving the system resource for a grid system operation.

22. The method of claim 20, further comprising terminating a reservation of a system resource for a grid system operation.

23. A method for autonomic management of grid system resources on a grid computing system, the method comprising:

monitoring the grid computing system for a trigger event, the trigger event comprising one of an initiation trigger event, a regulation trigger event, and a prediction trigger event;

accessing one of a plurality of system policies, wherein the plurality of system policies comprises a system prediction policy, each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system, the operational control parameter comprising a command to regulate the system resource;

regulating the system resource in response to a recognized trigger event according to one of the plurality of system policies and, the system resource comprising one of a client processor capacity, a client storage capacity, and a client memory capacity allocated to the grid computing system;

storing a system resource profile, the system resource profile identifying a system resource of a client, the system resource allocated by the client to the grid computing system.

24. A computer readable storage medium comprising computer readable code configured to carry out a method for autonomic management of system resources on a grid computing system, the method comprising:

monitoring the grid computing system for a trigger event;

accessing one of a plurality of system policies, each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system, wherein the plurality of system policies comprises a system prediction policy; and

regulating the system resource in response to a recognized trigger event according to one of the plurality of system policies.

25. The computer readable storage medium of claim 24, wherein the trigger event comprises one of an initiation trigger event, a regulation trigger event, and a prediction trigger event.

26. The computer readable storage medium of claim 24, wherein the method further comprises reserving the system resource for a grid system operation.

27. The computer readable storage medium of claim 24, wherein the method further comprises terminating a reservation of a system resource for a grid system operation.

28. The computer readable storage medium of claim 24, wherein the method further comprises arbitrating conflicting grid system operations according to an arbitration policy.

29. The computer readable storage medium of claim 24, wherein the method further comprises storing a system resource profile, the system resource profile identifying a system resource of a client, the system resource allocated by the client to the grid computing system.

30. An apparatus for autonomic management of grid system resources on a grid computing system, the apparatus comprising:

means for monitoring the grid computing system for a trigger event;

means for accessing one of a plurality of system policies, each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system, wherein the plurality of system policies comprises a system prediction policy; and

means for regulating the system resource in response to a recognized trigger event according to one of the plurality of system policies.

31. The apparatus of claim 1, wherein the system prediction policy is based on collected historical information.

32. The apparatus of claim 31, wherein the regulation module is further configured to predictively adjust the system resource according to the system prediction policy in anticipation of a typical resource usage.

33. The method of claim 20, further comprising predictively adjusting the system resource according to the system prediction policy in anticipation of a typical resource usage, wherein the system prediction policy is based on collected historical information.

34. The method of claim 20, further comprising adjusting a fee assessed to a user of the grid computing system based on a change in the system resource.

35. The method of claim 20, further comprising blocking a potential change in at least one of the system policies according to a threshold corresponding with a subscription criteria.

9. EVIDENCE APPENDIX

There is no material to be included in the Evidence Appendix.

10. RELATED PROCEEDINGS APPENDIX

There is no material to be included in the Related Proceedings Appendix.